The Use of the Nutrition Screening Initiative DETERMINE Checklist to Identify the Nutritional Risk of Elderly Clients Participating in the Meals On Wheels Association of America Program

An Honors Thesis (HONRS 499)

by

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ABSTRACT

The role of good nutrition in the prevention and treatment of disease is gaining recognition from health care professionals across the country. Certain organizations, such as the Meals On Wheels Association of America caters to a concentrated group of the elderly population, and therefore, provides a perfect outlet for the implementation of a nutritional risk screening tool. The use of a screening tool, specifically the DETERMINE checklist associated with the Nutrition Screening Initiative, in this setting would provide Meals On Wheels clients with a low-cost, yet effective, method to evaluate their personal nutrition status, and therefore, give them personal responsibility for their health. It would also allow clients to share with physicians the nutritional risk factors they are facing, which would give the health care provider an opportunity to determine a preventative and proactive approach for potential chronic diseases before one fully develops.

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INTRODUCTION

Over the next six years, an estimated 1.3 billion dollars could be saved in health care costs if our elderly citizens were systematically screened for nutritional deficiency (1). The role of good nutrition in the prevention and treatment of disease is receiving acknowledgment from family practice physicians, managed care organizations, and other health care professionals. Certain organizations, such as the Meals On Wheels Association of America caters to a concentrated group of the elderly population, and therefore, provides a perfect outlet for the implementation of a nutritional risk screening tool. The use of a screening tool, specifically the DETERMINE checklist associated with the Nutrition Screening Initiative (Appendix A), in this setting would provide Meals On Wheels clients with a low-cost, yet effective, method to evaluate their personal nutrition status, and therefore, give them personal responsibility for their health. It would also allow clients to share with physicians the nutritional risk factors they are facing, which would give the health care provider an opportunity to determine a preventative and proactive approach for potential chronic diseases before one fully develops.

LITERATURE REVIEW

According to PubMed Health, malnutrition is defined as "the condition that occurs when your body does not get enough nutrients" (10). While child malnutrition in developing, non-Western countries receives a fairly large amount of publicity, malnutrition in this country, especially among the elderly population is often forgotten. In the figures below, malnutrition was observed and recorded in older adults living in four different settings: hospitals, nursing homes, rehabilitation centers, and the community (9). As Figure 1 shows, 6% of those living in the community are classified as malnourished (9). This percentage may not seem very large, but when you combine it with the 32% of older adults at risk for malnutrition, it begins to appear more significant (9). If nothing is done to address this issue while older adults are still able to live in the community, the condition will obviously not improve when they are moved to other settings, such as nursing homes, hospitals, or rehabilitation centers. According to Figures 2, 3, and 4, all three of these settings have significantly higher percentages of persons classified as malnourished or at risk for malnutrition (9). By 2030, in the United States alone, it is believed that our elderly population will double and reach 72 million people (6). When considering this massive increase in the elderly population, the 38% of malnourished and at risk persons in the community will have an even greater impact on this country's health care resources and finances. It is imperative to address this issue before the poor nutritional status turns into a chronic disease with severe and expensive consequences.

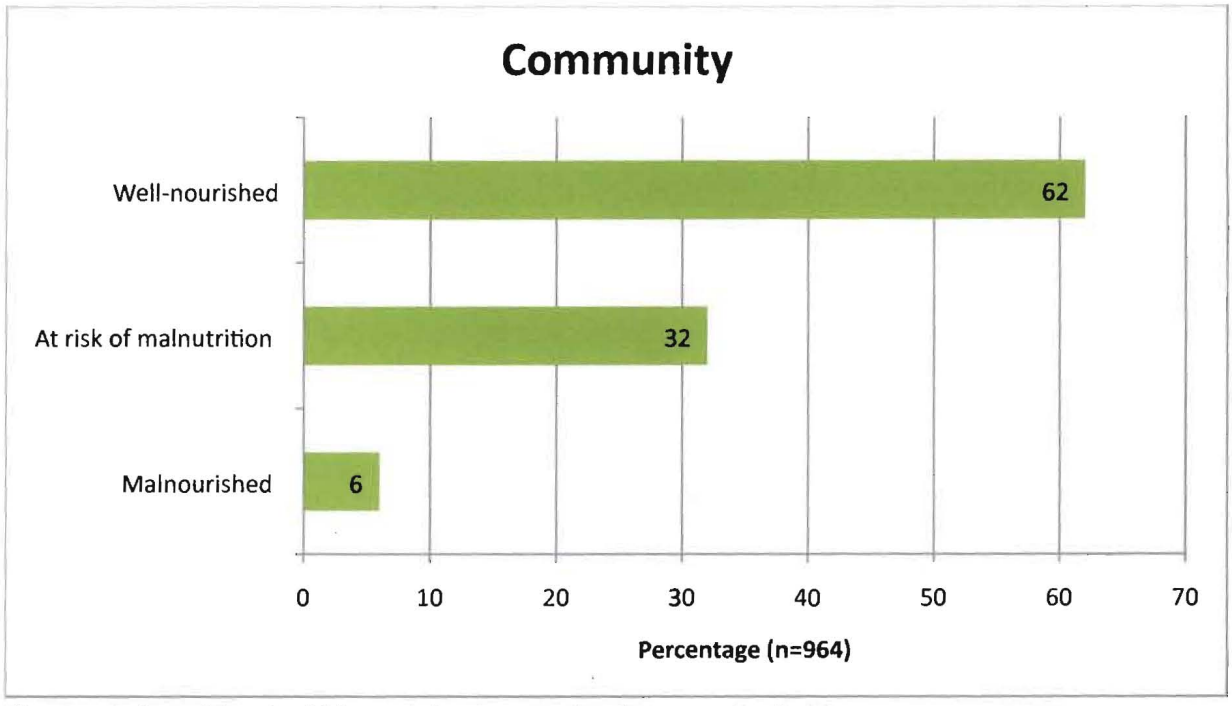

Fig. 1. Malnutrition in Older Adults Across the Community Setting

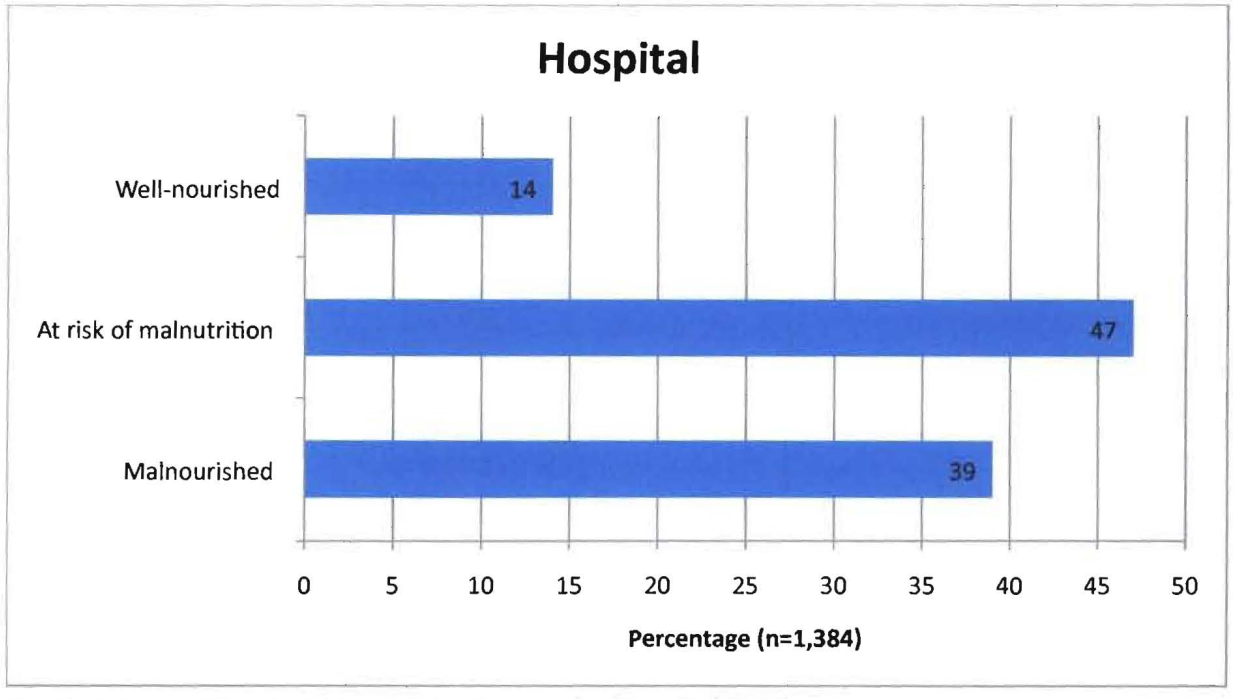

Fig. 2. Malnutrition in Older Adults Across the Hospital Setting

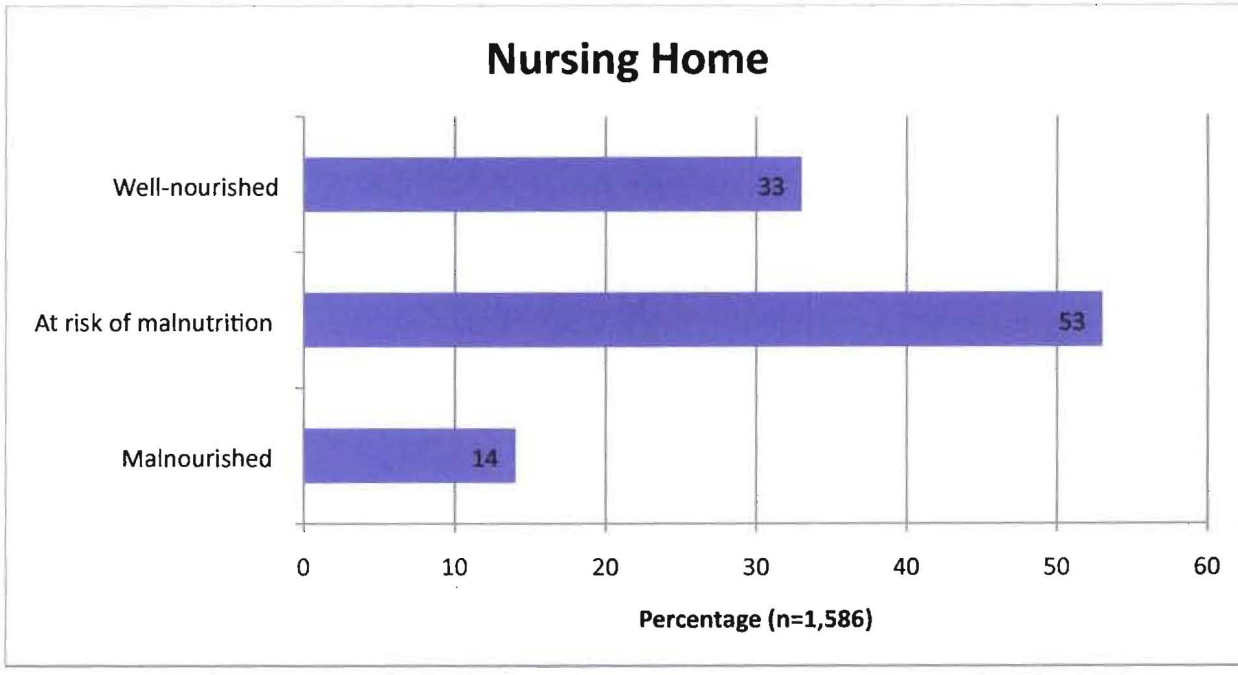

Fig. 3. Malnutrition in Older Adults Across the Nursing Home Setting

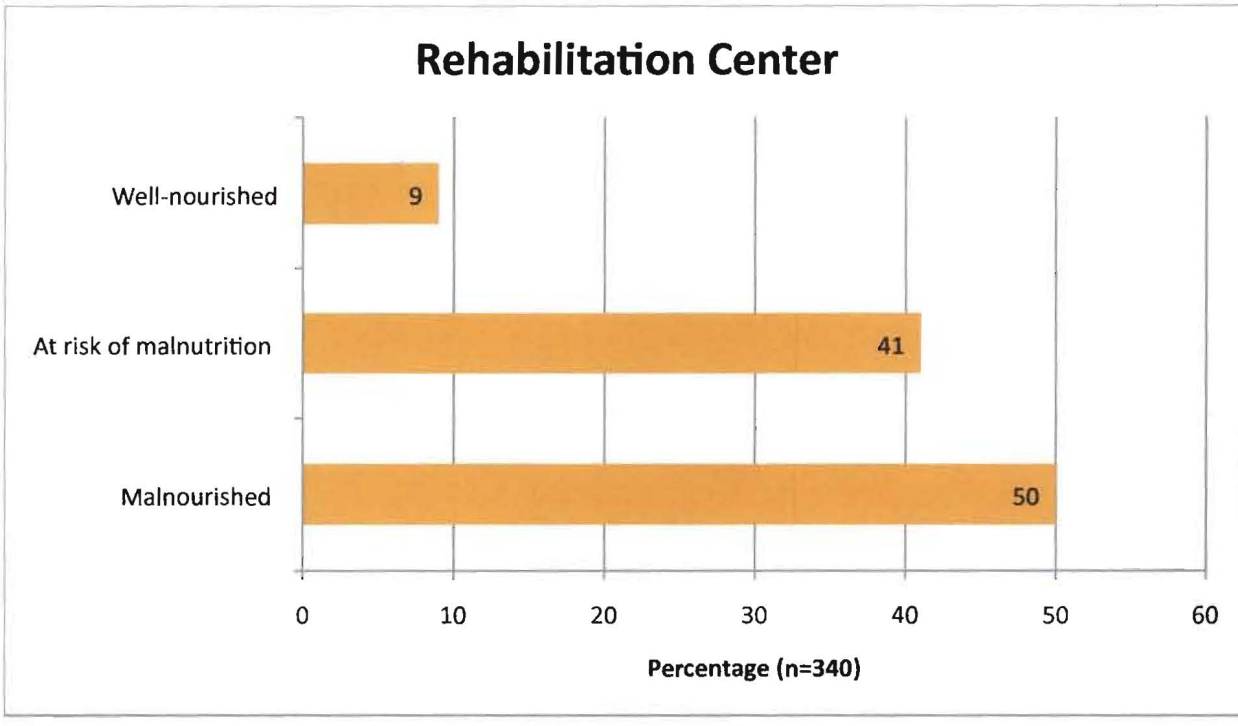

Fig. 4. Malnutrition in Older Adults Across the Rehabilitation Setting

While the previous figures show startling percentages of persons malnourished and at risk in the hospital, nursing home, and rehabilitation settings, the purpose of this paper is to focus on those in the community. There are many factors associated with aging that contribute to malnutrition no matter what setting is observed. These include, but are not limited to, the following (2):

- **Socioeconomic status** (low income, difficult job history, lack of education, widowed or not married, currently living alone)
- **Mental and physical condition** (physically disabled, daily tasks are a challenge, use of assistive devices, low cognitive ability, depression)
- **Cultural and social circumstances** (unfamiliar culture, reduced social life, lack of information and social programs available, missing social support, isolation)
- **Health status** (unavailable health services, diagnosed with chronic diseases, dental and mouth problems, misuse of medications)
- **Lifestyle decisions** (smoking, use of drugs and alcohol, lack of physical activity)
- **Environmental status** (limited access to necessary vaccines, portable water, and electricity, poor sewer and waste removal systems)
- **Access to food** (inadequate food available, insufficient food and nutrition programs, poverty)

All of these factors contribute to low food intake (2). Low food intake causes poor supplies of energy, protein, vitamins, minerals, water, dietary fiber, and other necessities obtained from food (2). Low food intake leads to an overall poor diet, a poor nutritional status, and therefore, a low quality of life for elderly persons living in the community (2).

Eventually, clinical consequences will arise from a poor nutrition status and low quality of life. These include, but are not limited to, skeletal muscle wasting (sarcopenia), increased risk of falls, placing the elderly person in an institution of some sort, complications after surgery, increased hospital and rehabilitation stays, pressure ulcers, compromised wound healing, weakened muscle and respiratory function, or even death (9). It is possible to prevent some of these conditions from arising, and therefore save energy, money, and resources, if the correct target audience is properly screened for nutritional deficiency and identified. According to the American Dietetic Association, for each dollar spent on nutritional screening and intervention, a minimum of $3.25 is saved (11).

An organization that would provide an ideal vehicle to target the elderly in the community is the Meals On Wheels Association of America. "The Meals On Wheels Association of America is the oldest and largest national organization composed of and representing local, community-based Senior Nutrition Programs in all 50 U.S. states, as well as the U.S. Territories" (7). There are about 5,000 local programs across the country belonging to the larger national organization (7). All together they provide over one million meals per day to needy seniors (7). In September 2009, Meals on Wheels set a goal to end senior hunger in the United States by 2020 (7). Currently, there are an estimated 6 million seniors facing the threat of hunger, so the task at hand is not small or simple (7).

In order to qualify for the home-delivered meal service, a client must be 60 years of age or older and they must demonstrate a need for the service (5). This includes, but is not limited

to, completely homebound, unable to leave the home without assistance, and/or the client's family is unable to prepare all meals (5).

Using this specific clientele for the implementation of a nutritional risk screening tool would be an excellent place to start addressing the problem of malnutrition in the elderly population. Simply identifying older adults at nutritional risk is an imperative initial step for the maintenance of a high quality of life and functional status (3). The Nutrition Screening Initiative is a "multifaceted effort to promote routine nutrition screening and better nutrition care for older Americans" (8). The American Dietetic Association, the American Academy of Family Physicians, and the National Council on Aging all helped develop the initiative and believe that nutritional status is "as vital to health assessment as blood pressure and pulse rate" (3). Within the Nutrition Screening Initiative is a simple, 10-question self-assessment DETERMINE checklist that asks about various aspects of a person's lifestyle and then assigns a numerical value based on the answer. The various questions address topics such as disease, eating habits, oral problems, financial situation, social interaction, medication use, and physical ability (3). The numerical values are added together to determine if the elderly person has no nutritional risk (score of 0 to 2), moderate nutritional risk (score of 3 to 5), or high nutritional risk (score of 6 or more) (4).

The use of this checklist is quick, easy, low-cost, and not only addresses nutritional risk, but can also identify possible underlying chronic conditions (4). A limitation of the checklist is that it is extremely dependent on the elderly person being honest and truthful when answering

the questions (4). Nevertheless, it is important to start the education and awareness process somewhere.

CONCLUSION

The checklist would be easy to implement at the local Meals On Wheels program level. For existing clients, meal-deliverers could take it directly to them and then pick it up with the next meal delivered. Another option is having a registered dietitian or other trained health professional go to each client personally and walk them through the checklist if the number of clients in a local program would be appropriate for that method. Mailing the checklists is a third option, but most likely the percentage of returned checklists via mail would be less than the percentage of returned checklists from the previous two methods. For new clients, it would be best to make the checklist part of the initial registration and approval process.

With up to one-quarter of all older adults experiencing malnutrition, it only seems appropriate to implement a screening tool in a setting where there is much possibility to maintain, or even improve, the wellness of the elderly population (3). Using the DETERMINE checklist would provide Meals On Wheels clients with a low-cost, yet effective, method to evaluate their personal nutrition status, and therefore, give them personal responsibility for their health. It would also allow clients to share with physicians the nutritional risk factors they

are facing, which would give the health care provider an opportunity to determine a preventative and proactive approach for potential chronic diseases before one fully develops.

"Optimal nutrition contributes to healthy aging" (3). Using nutrition as a primary prevention tool ultimately promotes health and improves the quality of life for aging adults. Caregivers, health care providers, and our country should be taking every possible action to make sure the elderly population that has given so much to us is given just as much in return.

APPENDIX A

The Warning Signs of poor nutritional health are often overlooked. Use this checklist to find *out if you or someone you know is at nutritional risk.*

DETERMINE YOUR NUTRITIONAL HEALTH

Read the statements below. Circle the number in the yes column for those that apply to you or someone you know. For each yes answer, score the number in the box. Total your nutritional score.

	YES
I have an illness or condition that made me change the kind and/or amount of food I eat.	2
I eat fewer than 2 meals per day.	3
I eat few fruits or vegetables, or milk products.	2
I have 3 or more drinks of beer, liquor or wine almost **every** dav.	2
I have tooth or mouth problems that make it hard for me to eat.	2
I don't always have enough money to buy the food I need.	4
I eat alone most of the time.	1
I take 3 or more different prescribed or over-the-counter drugs a day.	1
Without wanting to, I have lost or gained 10 pounds in the last 6 months.	2
I am not always physically able to shop, cook and/or feed myself.	2
TOTAL	

Total Your Nutritional Score. If it's —

0-2 **Good!** Recheck your nutritional score in 6 months.

3-5 You **are at moderate nutritional risk.** See what can be done to improve your eating habits and lifestyle. Your office on aging, senior nutrition program, senior citizens center or health department can help. Recheck your nutritional score in 3 months.

6 or more You **are at high nutritional risk.** Bring this checklist the next time you see your doctor, dietitian or other qualified health or social service professional. Talk with them about any problems you may have. Ask for help to improve your nutritional health.

These materials developed and distributed by the Nutrition Screening Initiative, a project of:

AMERICAN ACADEMY OF FAMILY PHYSICIANS

THE AMERICAN DIETETIC ASSOCIATION

NATIONAL COUNCIL ON THE AGING, INC.

Remember tbat warning signs suggest risk, but do not represent diagnosis of any condition. Turn tbe page to learn more about tbe Warning Signs of poor nutritional bealth.

The Nutrition Checklist is based on the **Warning** Signs described below. Use the word **DETERMINE** to remind you of the **Warning** Signs.

DISEASE

Any disease, illness or chronic condition which causes you to change the way you eat, or makes it hard for you to eat, puts your nutritional health at risk. Four out of five adults have chronic diseases that are affected by diet. Confusion or memory loss that keeps getting worse is estimated to affect one out of five or more of older adults. This can make it hard to remember what, when or if you've eaten. Feeling sad or depressed, which happens to about one in eight older adults, can cause big changes in appetite, digestion, energy level, weight and well-being.

EATING POORLY

Eating too little and eating too much both lead to poor health. Eating the same foods day after day or not eating fruit, vegetables, and milk products daily will also cause poor nutritional health. One in five adults skip meals daily. Only 13% of adults eat the minimum amount of fruit and vegetables needed. One in four older adults drink too much alcohol. Many health problems become worse if you drink more than one or two alcoholic beverages per day.

TOOTH LOSS/ MOUTH PAIN

A healthy mouth, teeth and gums are needed to eat. Missing, loose or rotten teeth or dentures which don't fit well or cause mouth sores make it hard to eat.

ECONOMIC HARDSHIP

As many as 40% of older Americans have incomes of less than $6,000 per year. Having less--or choosing to spend less--than $2530 per week for food makes it very hard to get the foods you need to stay healthy.

REDUCED SOCIAL CONTACT

One-third of all older people live alone. Being with people daily has a positive effect on morale, well-being and eating.

MULTIPLE MEDICINES

Many older Americans must take medicines for health problems. Almost half of older Americans take multiple medicines daily. Growing old may change the way we respond to drugs. The more medicines you take, the greater the chance for side effects such as increased or decreased appetite, change in taste, constipation, weakness, drowsiness, diarrhea, nausea, and others. Vitamins or minerals when taken in large doses act like drugs and can cause harm. Alert your doctor to everything you take.

INVOLUNTARY WEIGHT LOSS/GAIN

Losing or gaming a lot of weight when you are not trying to do so is an important warning sign that must not be ignored. Being overweight or underweight also increases your chance of poor health.

NEEDS ASSISTANCE IN SELF CARE

Although most older people are able to eat, one of every five have trouble walking, shopping, buying and cooking food, especially as they get older.

ELDER YEARS ABOVE AGE 80

Most older people lead full and productive lives. But as age increases, risk of frailty and health problems increase. Checking your nutritional health regularly makes good sense.

The Nutrition Screening Initiative, 2626 Pennsylvania Avenue, NW, Suite 301, Washington, DC 20037

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